



City
of
Milwaukee



City of Milwaukee: Wind Turbine Final Proposal

*Matt Howard, Environmental
Sustainability Director*

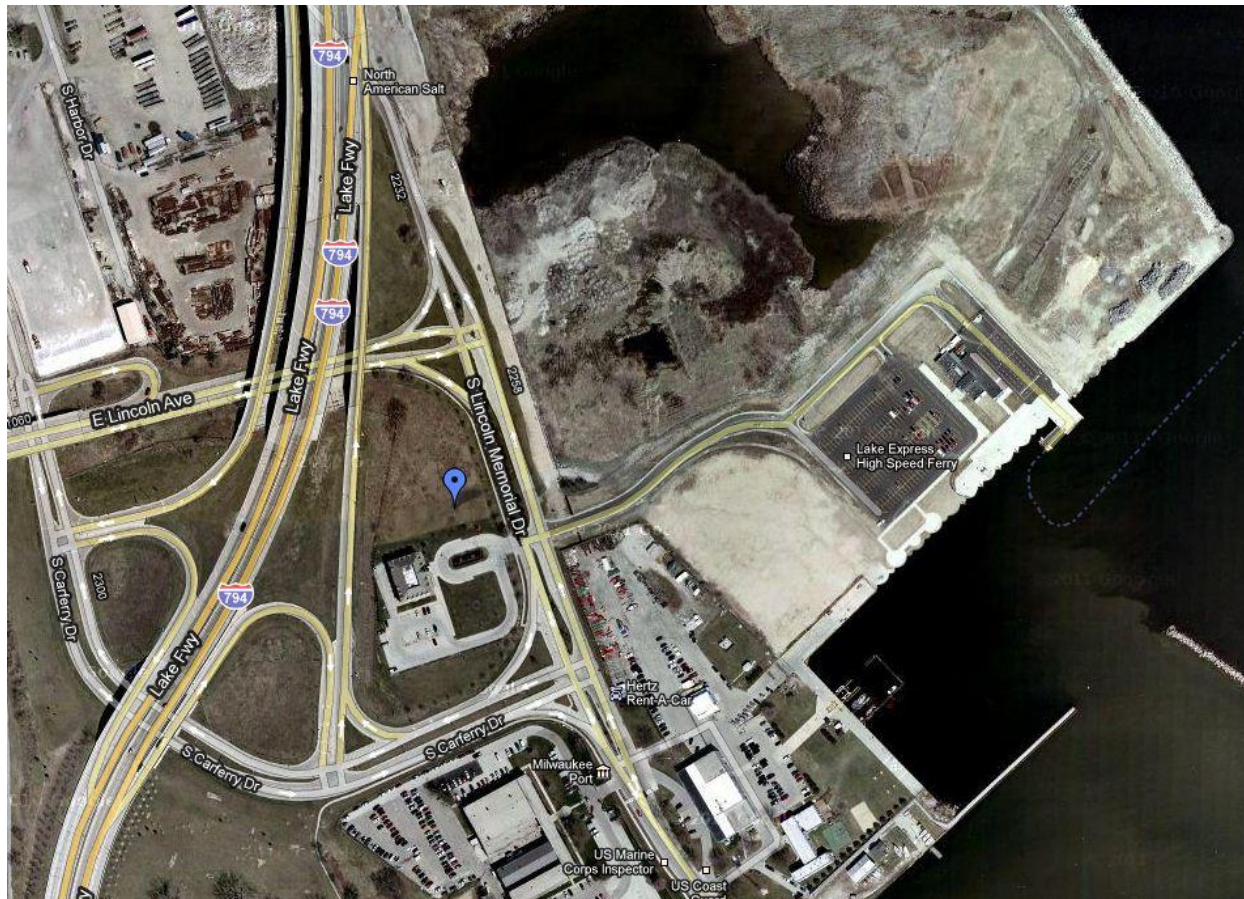


Project Basics

- Proposal to site ONE, small-scale wind turbine on City-owned building on Port Authority property
- 2323 S. Lincoln Memorial Dr., Port Administration Building
- Turbine will power ALL of Port Admin. Bldg's needs
- Best estimate of total cost of installation/operation: \$550,000-\$600,000
 - Federal grant for renewable energy: \$400,000
 - We Energies and Focus on Energy grants: \$200,000
- City will incur NO debt, nor financing – turbine will be paid for on day 1
- Mayor & OES believes this a smart, viable demonstration of the City's commitment to renewable energy



Project Site Map





Project Site Details

Port Administration Building
2323 S. Lincoln Memorial Drive

- 2010 Electricity Use: 100,240 kWh
- 2010 Electricity bill: \$12,351
- GHG Emissions: 76 metric tons of CO₂ from electricity
- 2011 Projected Bill (w/o turbine): \$13,067

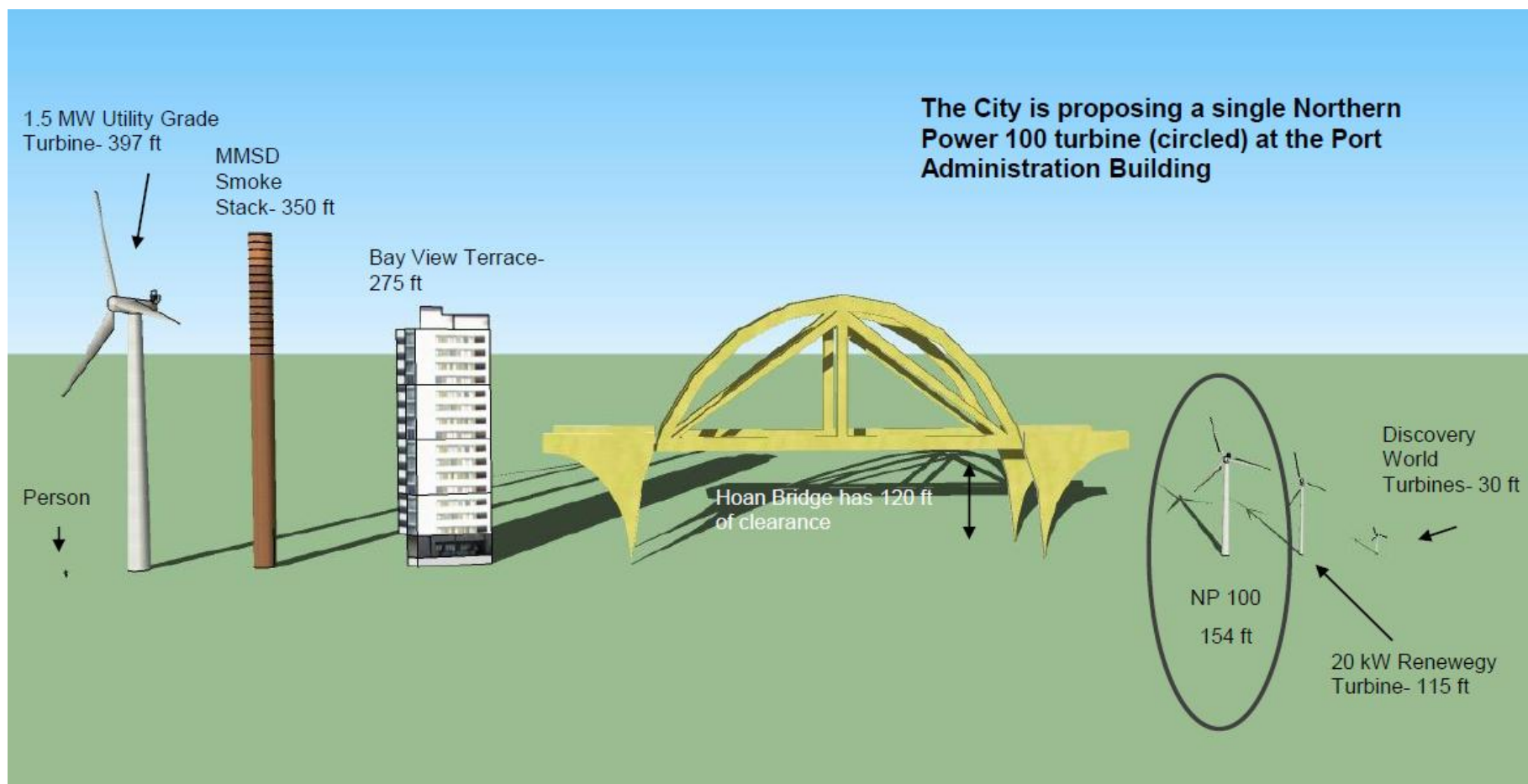


Wind Turbine Basics

- 100 kW Wind Turbine
- Tower: 120 ft; To tip of blade: 154 ft.
- Est. Annual Production: 109,000 to 152,000 kWh
- % of Port Admin. Bldg Electricity: 109%-152%
- Est. Annual Savings to City: \$14,000 to \$20,000 (at 2011 rates, revenue included)



Wind Turbine Comparison





Wind Turbine Photos



Ft. Atkinson – MATC Site – MREA March 19 Workshop



Wind Turbine Rendering





View from S. Shore Park



No turbine in City Skyline view



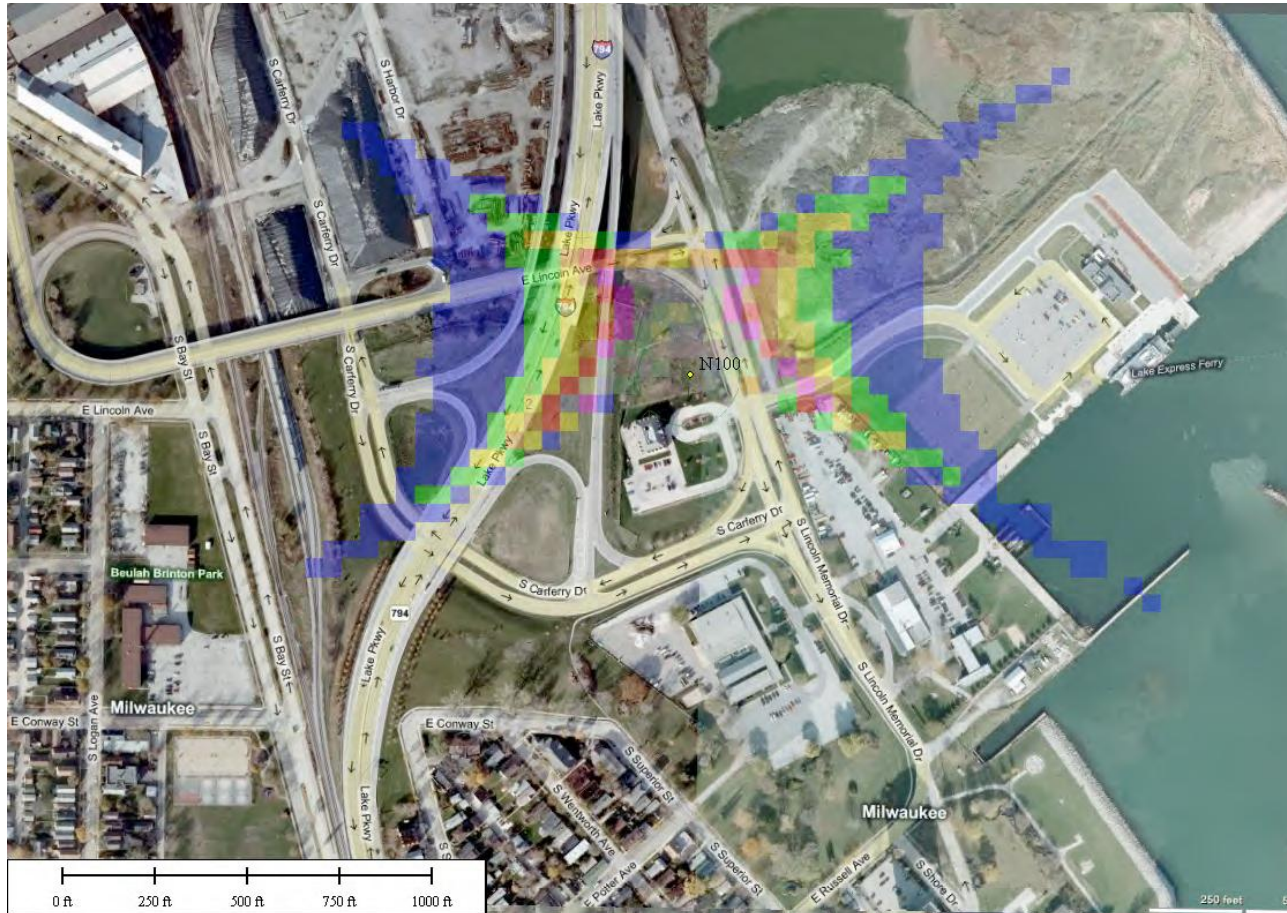
View from Veterans Park



Barely noticeable from
Veterans Park



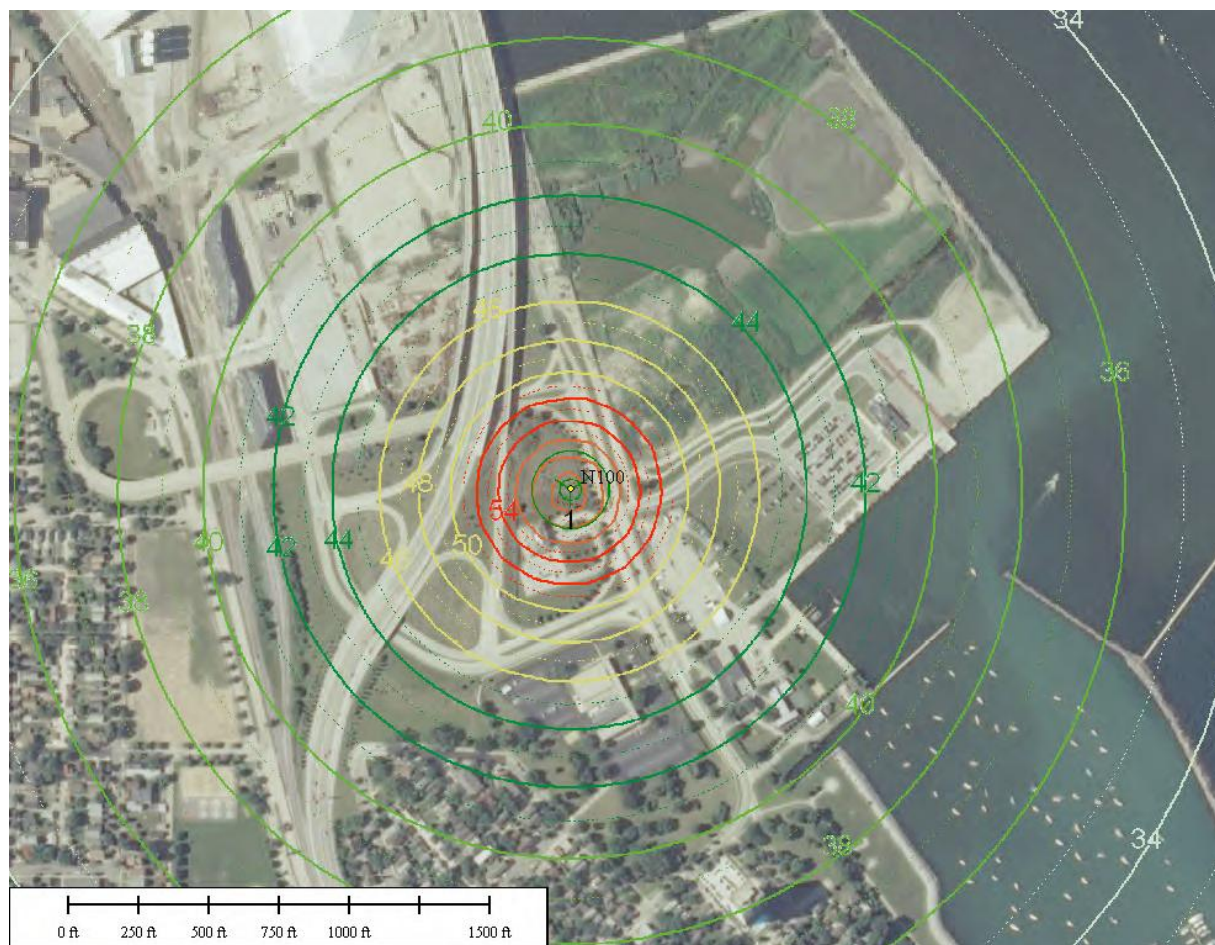
Shadow/Flicker Map



Conclusion: No
residences or buildings
impacted by shadow



Noise Map



E. Conway & S. Superior:
42 dBA

= Quiet bedroom at night (30s)
= Ave. home during day (50s)



Questions & Comments

For more information, please visit our Wind FAQ:

<http://city.milwaukee.gov/sustainability/WindProject>



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